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AUTHOR McAllister, Elizabeth A.
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ABSTRACT

A study investigated the efficacy of using the neurological impress method in peer tutoring during reading instruction. The neurological impress reading method is a unison reading procedure in which the student and teacher or tutor read aloud simultaneously and quickly, with the student placed slightly in front of the teacher so that the teacher's voice is directed into the student's right ear at close range. Ten fourth-grade students received treatment administered by 10 sixth-grade students, 15 minutes daily for 12 consecutive weeks, resulting in total contact time of 15 hours. The tutors received training in the impress method from a reading specialist. Library books chosen by the fourth-grade students were used as reading materials. The Peabody Picture Vocabulary Test was used to determine a mental age and I.Q. based on functioning vocabulary. From the I.Q. measure, each child's reading expectancy level could be computed and used to determine how much growth might be expected. Prior to treatment, the Silvaroli Informal Reading Inventory, Form A, was administered to each child to obtain oral reading levels in word recognition and comprehension. Form B was used as a posttest after treatment. The Houghton Mifflin Silent Reading Placement Test was used to determine each student's silent reading level. Results indicated that each fourth-grade student showed reading improvement of at least one-half year in the 12 weeks. The highest gain was 3 years in oral word recognition and 2 years in oral comprehension and silent reading. (Four tables of data are included.) (MM)

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A STUDY OF PEER TUTORS USING THE NEUROLOGICAL IMPRESS METHOD

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Elizabeth A. Mc Allister
Elementary Education Department
Towson State University
Towson, MD 21204

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A STUDY OF PEER TUTORS USING THE NEUROLOGICAL IMPRESS METHOD

INTRODUCTION

Study Overview

The purpose of this study was to determine the efficacy of using the neurological impress method in peer tutoring during reading instruction.

Ten sixth graders were taught by the reading specialist to implement the neurological impress method while tutoring ten fourth graders in reading. These tutors were selected by the classroom teachers on the basis of ability, personality, independence, and dependability. The fourth graders were selected by the classroom teachers on the basis of reading disability, desire to learn to read, and dependability.

Of the ten fourth grade subjects, there was a range of abilities: I.Q. 86-112, based on the Peabody Picture Vocabulary Test. Before treatment, the range of reading levels was 2.0 to 3.5 in silent reading and 2.0 to 4.0 in oral reading. The mental age range was 7.3 to 9.5; whereas, the chronological age range was 9.5 to 10.9.

Each sixth grade tutor employed the neurological impress method with one fourth grade student, 15 minutes daily for 12 consecutive weeks, resulting in total contact time of 15 hours. Both tutor and tutee signed a contract agreement and checked in with the researcher on a daily basis. The researcher was present during each session.

The materials used were library books chosen by the fourth grade students. Each student averaged completing one to two books weekly as compared to one to two books per month before this program began.

Statement of the Problem

With the increase in class size, teachers find it difficult to give enough one-to-one assistance during reading instruction. Many students fall behind and experience frustration as they flounder and and as their self-confidence suffers. A vicious cycle sets up and the student develops a dislike for reading while falling more behind. There is a need to reach pupils with help other than the teacher who is already split thirty ways.

Significance of the Study

Ways need to be found to meet the needs of individual students. If peer tutors can be trained to assist the teacher amielorate this problem, it should be made knows. Every teacher can use extra hands in order to better utilize time in direct instruction. It seems that needed practice and reinforcement can be afforder pupils through the use of tutors.

Limitations of the Study

Due to scheduling problems, only ten sixth graders were available for this study. Thus, only ten fourth grader were able to avail themselves of this opportunity.

THE NEUROLOGICAL IMPRESS METHOD

The neurological impress reading method is a unison reading procedure in which the student and teacher or tutor read aloud simultaneously and quickly. It is especially suitable for students who have not profited from intensive phonics instruction during the primary grades.

The teacher and reader jointly hold the book while the student is placed slightly in front of the teacher so that the teacher's voice is directed into the student's right ear at close range. The teacher slides a finger under each word as it is read in unison (Trela, 1977).

This approach to reading is spontaneous, and as few pauses as possible are made during the reading process. The teacher attempts no sound or word recognition instruction and the student is not corrected at any time but is encouraged to refrain from stopping on difficult words.

It is recommended that the method be used in fifteen minute sessions for a minimum of twelve hours over a period of three months.

REVIEW OF LITERATURE

R. G. Heckleman was the developer of the neurological impress method (NIM) in 1952 (Stinner, 1979). Then, he used the method with high school students who were disabled readers.The first ninth grade student gained 3.0 levels after employing the NIM for 12 hours over a three month period. Later, six tenth graders used the NIM method for

15 minutes a day for 12 hours, resulting in a mean reading gain of 2.2 grade levels.

Heckleman (1966) in an uncontrolled study, employed the NIM with 24 students in grades 6 - 10. After only 7.5 hours of instructional time, the mean gain was 2.2 years. This trial was followed by a controlled study with significant gains for the impress group.

Researchers and teachers are looking at the NIM with renewed interest as a means of modifying the developmental reading instruction time. William A. Henk (1983) adapted the DRA (directed reading activity) to include the NIM process DURING instruction. The guided silent reading portion of the lesson was replaced by simultaneous oral reading.

Stong and Traynellis (1983) studied the effects of the NIM process on reading fluency of elementary school children. Twenty-six students in grades 2 - 6 were placed in control and experimental groups. The impress students worked with tutors in 15 minute sessions, four days a week. The tutors emphasized reading at a normal, steady rate rather than developing comprehension, per se. The t-test was applied to the final scores on the SORT test (used as pre and post tests) resulting in significant gains in word recognition. Other positive effects were noted by the teachers. Eighty-three percent of the students felt they read better; 100 percent enjoyed reading more. All read with greater fluency and more confidence.

According to Heckelman (1986), the NIM is effective because it is a multisensory method using hearing, speech, sight and tactile modalities. The process also presents a model of correct reading which gives the child the feel of what is is to read normally. He said that it was told to him, "I didn't know this is how you read." (p. 412).

The neurological impress method has been successfully used with learning disabled students at elementay and secondary levels (Oliver, 1979 and Stinner, 1979). Both studies yielded significant gains in word recognition and comprehension. In Stinner's study, sixth grade tutors were used to work with fourth grade students.

Information regarding the feasibility of using the NIM process in developmental reading classes with peer tutors has not been collected. Thus, this study was conducted to examine this possibility during reading instruction.

COLLECTION OF DATA

The instruments used in this study were the Peabody Picture Vocabulary Test, the Silvaroli Informal Reading Inventory, Forms A and B, and the Houghton Mifflin Silent Reading Placement Tests.

The Peabody Picture Vocabulary Test was used to determine a Mental Age and I.Q. measure based on functioning vocabulary. Since vocabulary ability is a natural indicator of reading ability, this test was assumed to be adequate for the purpose of this study. From the I.Q. measure, each child's Reading Expectancy Level could be computed using the Bond-Tinker Reading Expectancy Formula. This information was used to determine how much growth might be expected.

Prior to treatment, the Silvaroli Informal Reading Inventory, Form A was administered to each child in order to obtain oral reading levels in word recognition and in comprehension. Form B was used as a posttest after the students completed treatment. The Houghton Mifflin Silent Reading Placement Test was used to determine each student's silent reading level. Later the silent reading scores were compared with each student's instructional placement in the reading classroom.

ANALYSIS OF DATA

Table 1 presents the Chronological Ages and the computed Mental Ages, I.Q., and Reading Expectancy Levels of each fourth grade student.

Table 1

Student Chronological Ages,

Mental Ages, I.Q., and Reading Expectancy Levels

Student	C.A.	M.A.	I.Q.	R.E.L.
1	9.9	9.5	96	4.6
2	10.9	7.7	100	4.8
3	9.5	7.3	93	4.5
4	9.8	8.1	112	5.2
5	10.9	9.5	86	4.2
6	9.7	9.0	102	4.9
7	10.0	8.4	87	4.3
8	10.2	8.6	88	4.3
9	10.4	8.10	98	4.7
10	9.8	7.11	99	4.7

These ranges in Chronological Ages, Mental Ages, and I.Q. measures are: C.A., 9.5-10.9; M.A., 7.3-9.5; and I.Q., 93-112. According to the Reading Expectancy Formula, each

student should be reading at least on grade level.

The initial reading levels are shown in Table 2. The range of ability in silent reading was 2.0-3.5. The range of ability in oral reading is given in two areas of word recognition and comprehension, which are: W/R, 2.0-4.0; and, C, 2.0-3.5.

Table 2

Initial Reading Levels

Student	W/R	Oral C	Silent
1	2.0	2.0	2.0
2	2.0	2.0	2.0
3	3.0	2.5	2.5
4	2.0	3.0	3.5
5	3.5	2.0	2.5
6	3.0	2.5	2.5
7	3.0	2.0	2.0
8	4.0	2.0	2.5
9	3.0	3.0	3.0
10	2.0	3.0	3.5
$\bar{x}$	2.7	2.4	2.5

Posttests results are recorded in Table 3. Alternate forms of the initial tests instruments were administered to each fourth grade student in this program.

Table 3

Posttest Results

Student	W/R	Oral C	Silent
1	3.0	3.0	3.0
2	3.0	3.0	3.0
3	3.0	3.0	3.0
4	5.0	4.0	4.0
5	5.0	4.0	3.5
6	4.0	4.0	3.5
7	5.0	4.0	3.5
8	5.0	3.0	4.0
9	3.0	3.0	3.5
$\bar{x}$	4.1	3.5	3.5

Each student showed gains in some areas. Only two students failed to gain in one area: Student 3 evinced zero gain in oral word recognition; and Student 10 showed zero gain in oral comprehension. However, both of these students gained in other areas. The least amount of gain was .5 (5 months) to 3.0 (3 years) reading growth. Student 4 gained three years in oral word recognition (word lists) only. The highest gain in oral comprehension was 2.0 (2 years) and in silent reading, 1.5 (one and one-half years). These results are recorded in Table 4.

Table 4

Reading Gain After Treatment

Student	W/R Oral	C	Silent
1	1.0	1.0	1.0
2	1.0	1.0	1.0
3	.0	.5	.5
4	3.0	1.0	.5
5	1.5	2.0	1.0
6	1.0	1.5	1.0
7	2.0	2.0	1.5
8	1.0	2.0	1.5
9	2.0	1.0	1.0
$\bar{x}$	1.4	1.1	.5

At the start of this study, the mean oral W/R was 2.7; oral comprehension, 2.4, and silent reading, 2.5. Posttest data revealed mean scores as follows: W/R, 4.1; comprehension, 3.5; silent, 3.5. This results,after 15 hours using the NIM process, in a mean gain of:

Oral W/R + 1.4

Oral Comprehension + 1.1

Silent Comprehension + 1.0

After fifteen weeks, less than four months of the focused practice yielded one year or more in reading growth. Had the procedure been used continually through the entire

year, it is conceivable that this group of ten students could be reading at or near grade level. Three students did reach grade level and above in just fifteen weeks of help using the Neurological Impress Method.

SUMMARY

This study was conducted in order to determine the effectiveness of the use of the neurological impress method by peer tutors in a reading situation.

Ten fourth graders received treatment administered by ten sixth grade tutors, fifteen minutes daily, for twelve weeks. Each student was committed to the program and under signed contract to participate.

Affective outcomes were also noted. The dyad groups of tutor/tutee developed bonds of friendship and support. Each student showed enthusiasm about the apparent improvements in reading, and verbally stated so. Each tutor and his pupil remained dependable and motivated for the entire time of the study.

Each fourth grade student showed reading improvement of at lease one-half year in the twelve weeks. The highest gain was three years in oral word recognition and two years in oral comprehension and silent reading.

CONCLUSION

Based on this study, it is felt that the NIM shows promise as an effective technique for reading instruction. Also, use of peer tutors is a viable alternative to the crowded classroom situation.

REFERENCES

Anderson, Betty (1981). The missing ingredient: fluent oral reading. The Elementary School Journal. 81 (3), 173-77.

Heckelman, R.G. (1966). Using the neurological impress remedial-reading technique. Academic Therapy Quarterly, 235-39.

_____ (1969). A neurological impress method of remedial reading instruction. Academic Therapy Quarterly. 4, 277-82.

_____ (1986). N.I.M. revisited. Academic Therapy. 21 (4), 411-20.

Henk, W.A. (1983). Adapting the NIM to improve comprehension. Academic Therapy. (1), 97-101.

_____ (1983). NIM plus DRA - a winning combination. The Reading Teacher. 36 (9), 922-23.

Hollingsworth, P.M. (1970). An experience with the impress method of reading attack in word recognition. The Reading Teacher. 24, 112-14,187.

Oliver, R.W. (1979). A study of the neurological impress method as a technique of improving the reading achievement of an elementary and a secondary reader. Unpublished master's project, University of Central Florida.

Stinner, M.C. (1979) The use of the neurological impress method in accelerating reading levels in selected learning disabled children. Unpublished master's project. University of Central Florida.

Strong, M.W. & Traynellis, E. (1983, March). Studied effects of NIM on reading fluency of elementary school children. Winston-Salem, NC: The Meeting of the North Carolina Council of the International Reading Association. (ERIC Document Reproduction Service No. ED 2333326).